

SECTION 2 Work Plan Approach

2.1 Project Scope and Objectives

The general objective of the activities and schedules of this Field Sampling Plan is to establish the nature and extent of polychlorinated biphenyl (PCB) contamination in the API/PC/KR study area, prior to environmental remediation activities. Numerous studies over the years have documented high PCB concentrations in water, sediment, soil, and fish from the study area. However, spatial and temporal coverage of the Site is incomplete, and the quality of the analytical data in some previous studies is inadequate. These problems combine to limit the usefulness of existing PCB data sets.

The objectives of this investigation include the following:

- Establish baseline (pre-remedial action) PCB concentrations in surface water, fish, and sediments collected from within the study area.
- Evaluate PCB concentrations upstream of the study area.
- Investigate the seasonal variation in water column PCB concentrations (summer vs. winter; dry weather vs. wet weather), to establish the importance of temporally variable contaminant bioavailability due to bioturbation and other biological activity, sediment resuspension during rain events, etc.

The activities implemented to achieve these objectives include:

- Sampling surface water, resident fish, sediments of several types, and caged fish and semipermeable membrane devices (SPMDs) from selected locations in the study area.
- Analyzing these samples for individual PCB congeners. Data for total PCBs are then obtained from the sum of the individual congener concentrations. Note that analysis of PCBs by congener not only allows for lower detection limits to be obtained (relative to Aroclor analyses) but also generally allows for more accurate analyses (including total PCB values) and it provides a better basis for understanding PCB fate and transport in the environment.